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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,689	04/13/2004	Jun Kamada	01-51400	2895

79326 7590 06/15/2010
Fujitsu Patent Center
Fujitsu Management Services of America, Inc.
2318 Mill Road, Suite 1010
Alexandria, VA 22314

EXAMINER

ZECHER, CORDELIA P K

ART UNIT	PAPER NUMBER
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2432

NOTIFICATION DATE	DELIVERY MODE
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06/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/822,689	Applicant(s) KAMADA ET AL.	
	Examiner Cordelia Zecher	Art Unit 2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-22, 24-33, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-22, 24-33, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2010 has been entered.

Response to Arguments

2. Applicant's arguments, see Remarks, filed April 20, 2010, with respect to 101 have been fully considered and are persuasive. The rejection of claim 27 under 101 has been withdrawn.

3. Applicant's arguments filed April 20, 2010 have been fully considered but they are not persuasive. Applicant argues that Keller in view of Ellison fails to teach or suggest any configuration of a CPU. However, Keller teaches the computer system includes a CPU coupled through a system data bus to a main memory and a mass storage peripheral preferably including a disk drive controller and a hard disk drive unit (column 5, lines 49-53). In addition, Ellison teaches logical and physical definitions of hardware and software components that interact directly or indirectly with an operating system of the computer system (column 3, lines 61-64) and that the system includes a

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CPU (column 5, line 57-column 6, line 13). Therefore Keller in view of Ellison teaches a configuration of the CPU.

4. Applicant argues that the dependent claims are allowable at least for their dependence on the independent claims. As the independents are rejected, so are the dependents.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

6. Claims 17, 18, 20, 24, 25, 27 – 29, 31, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller, and further in view of Ellison et al's US Patent 6,507,904. Referring to claims 17, 27 and 28, Keller teaches a central processing unit (CPU) (column 5, lines 49-53) comprising:

- a. An input unit in the CPU to input a command that is executed by using a firmware or a logic circuit (column 27, lines 9-11).
- b. A storing unit in the CPU to store a plurality of operation modes and a plurality of commands, each one of the modes corresponding to a different set of commands (column 33, lines 9-13).
- c. A retaining unit in the CPU to retain a plurality of sets of resources to be used with the firmware or logic circuit (column 22, lines 45-49).

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- d. A determining unit in the CPU to determine whether the input command is included or not in the set of commands corresponding to a current operation mode (column 27, lines 19-23).
 - e. An execution unit in the CPU to acquire resources from the access control unit (column 27, lines 34-37) and to execute the input command by using the firmware or the logic circuit, when the input command is included in the set of commands corresponding to the current operation mode (column 27, lines 17-21).
7. Keller does not explicitly disclose:
- f. A different set of the resources being available when each one of the operation modes is set, or
 - g. An access control unit in the CPU to refine the resources retained by the retaining unit to an accessible set of resources corresponding to the current operation mode, and to determine, when the input command is included in the set of commands corresponding to the current operation mode, whether a necessary resource to execute the input command is included or not in the accessible set of resources.
8. However, Ellison discloses a computer system including a CPU (column 5, line 57-column 6, line 13), the operating system having various rings, or operating modes and each ring is a logical division of hardware and software (column 3, lines 64-67). Ellison goes on to teach the processor verifying and loading a ring-0 nub software module into the isolated area of memory (column 4, lines 63-65). Keller and Ellison are

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analogous art because they are from the same field of endeavor, computer systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Keller and Ellison before him or her, to modify the system of Keller to include the rings of Ellison. The suggestion/motivation for doing so would have been to protect the integrity of computer systems and increase trust of users (column 1, lines 21-24).

9. Referring to claims 18 and 29, Keller teaches that the input unit inputs an operation mode adding command for storing a new operation mode in the storing unit, and the execution unit makes the storing unit store the new operating mode (column 28, lines 6-10).

10. Referring to claims 20 and 31, Keller teaches a firmware acquiring command for acquiring a new firmware, and then acquiring that firmware (column 9, lines 35-39).

11. Referring to claims 24 and 35, Keller teaches:

h. An operation mode deleting unit that deletes a specified operation mode from the storing unit (column 36, lines 21-22).

i. A firmware deleting unit that deletes firmware corresponding to the operation mode deleted (column 36, lines 12-14).

12. Referring to claims 25, and 36, Keller teaches requesting an external emulator to execute the input command when the input command is not included in the set of commands corresponding to the current operation mode (column 36, lines 35-44). While it does not explicitly state that an error occurred, it is inherent that the system must have encountered an error to be able to detect that the application was in a legacy format.

13. Claims 19 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller in view of Ellison and further in view of Heinonen et al's US Patent 6,633,758 B1. Keller in view of Ellison discloses all the limitations of the parent claims. Keller in view of Ellison does not explicitly disclose storing the new operation mode when the number of commands is greater than the number of commands corresponding to any one of the operating modes. However, Heinonen discloses creating a new operational mode consisting of existing parameters from existing operational modes and adding additional application specific parameters (column 3, lines 4-10). Keller in view of Ellison and Heinonen are analogous art because they are from the same field of endeavor, communication devices. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Keller in view of Ellison and Heinonen before him or her, to modify the system of Keller in view of Ellison to include the addition of operating modes of Heinonen. The suggestion/motivation for doing so would have been to have more available applications (column 1, line 67-column 2, line 11).

14. Claims 21, 22, 32, and 33 are rejected under 35 USC 103 (a) as being obvious over Keller in view of Ellison and further in view of Bryon Nevis et al's US Patent 6,581,159. Referring to claims 22 and 33, Keller in view of Ellison discloses all the limitations of the parent claims. Keller in view of Ellison does not appear to explicitly disclose encrypting the firmware with a digital signature. However, Nevis discloses

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using digital signature techniques to validate the firmware (column 4, lines 28-30). Keller in view of Ellison and Nevis are analogous art because they are from the same field of endeavor, of changing operating modes. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Keller in view of Ellison and Nevis before him or her, to modify Keller in view of Ellison to include the encryption of Nevis. The motivation for doing so would have been that it is more secure and resistant to tampering (column 1, 26-27).

15. Referring to claims 21 and 32, the digital signature technique, as described in claims 22 and 33, is an encryption/decryption method, therefor claims 21 and 32 are also rejected. In addition, Nevis teaches that the firmware is encrypted (column 6, claim 7).

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller in view of Ellison, further in view of Mark Biondi's US Patent 6,622,246 and further in view of Brent Gregory et al's US Patent 5,748,488. Referring to claim 26, Keller in view of Ellison discloses all the limitations of the parent claim, as well as acquiring firmware (Keller, column 9, lines 35-39). Keller in view of Ellison does not appear to explicitly disclose loading logic circuit data instead of firmware. However, Biondi discloses using a logic circuit instead of firmware (column 6, lines 26-30). At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Keller in view of Ellison and Biondi before him or her, to modify the firmware acquiring of Keller in view of Ellison to include using a logic circuit instead of Biondi. The motivation

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for doing so is that any machine capable of performing the steps of the firmware could be used to replace it (column 6, lines 32-35).

17. Keller in view of Ellison in view of Biondi does not appear to disclose how to implement the logic circuit that is replacing the firmware. Gregory discloses that to generate a logic circuit all that is needed is the information on the signals (column 2, lines 28-30). Therefor instead of passing the actual firmware, as taught by Keller in view of Ellison, one would need to pass the data on the signals. Gregory goes on to disclose how to generate that logic circuit after receiving the appropriate information on the signals (column 2, lines 40-42). At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Keller, Ellison, Biondi and Gregory before him or her, to modify Keller in view of Ellison in view of Biondi to include generating the logic circuit of Gregory. Therefor it would have been obvious after modifying Keller in view of Ellison with Biondi to include how to implement the logic circuit mentioned as taught by Gregory.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cordelia Zecher whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. Z./

Examiner, Art Unit 2432

/Benjamin E Lanier/

Primary Examiner, Art Unit 2432